Grade 6 Math topics

A. Whole numbers

1. Place values in whole numbers up to 1 million
2. Place values in whole numbers up to billions
3. Word names for numbers
4. Compare whole numbers
5. Order whole numbers
6. Use logical reasoning to find the order

B. Add and subtract whole numbers

1. Add and subtract whole numbers
2. Add and subtract whole numbers: word problems
3. Complete addition and subtraction sentences
4. Estimate sums and differences of whole numbers
5. Estimate sums and differences: word problems

C. Multiply whole numbers

1. Multiply whole numbers
2. Multiply whole numbers: word problems
3. Complete multiplication sentences
4. Multiply numbers ending in zeros
5. Multiply three or more numbers: word problems
6. Estimate products
7. Estimate products: word problems

D. Divide whole numbers

1. Divisibility rules
2. Divide by two-digit numbers using partial quotients
3. Divide by two-digit numbers
4. Divide numbers ending in zeros: word problems
5. Adjust quotients

6. Estimate quotients: two-digit divisors
7. Estimate quotients
8. Estimate quotients: word problems

E. Exponents

1. Write multiplication expressions using exponents
2. Evaluate powers
3. Find the missing exponent or base

F. Mixed operations: whole numbers

1. Add, subtract, multiply or divide two whole numbers
2. Add, subtract, multiply or divide two whole numbers: word problems
3. Estimate to solve word problems
4. Multi-step word problems
5. Word problems with extra or missing information
6. Evaluate numerical expressions with parentheses in different places
7. Input/output tables with addition, subtraction, multiplication and division

G. Number theory

1. Prime or composite
2. Identify factors
3. Prime factorization
4. Prime factorization with exponents
5. Greatest common factor
6. Least common multiple
7. GCF and LCM: word problems

H. Decimals

1. What decimal number is illustrated?
2. Round decimals
3. Round whole numbers and decimals: find the missing digit
4. Decimal number lines
5. Compare decimals using models
6. Compare decimals on number lines
7. Compare decimal numbers
8. Put decimal numbers in order
9. Compare, order and round decimals: word problems

I. Add and subtract decimals

1. Add and subtract decimal numbers
2. Add and subtract decimals: word problems
3. Estimate sums and differences of decimals using rounding
4. Estimate sums and differences of decimals using benchmarks
5. Maps with decimal distances

J. Multiply and divide decimals

1. Multiply and divide decimals by powers of ten
2. Multiply a decimal by a one-digit whole number using blocks
3. Multiply a decimal by a one-digit whole number using the distributive property
4. Multiply a decimal by a two-digit whole number using area models
5. Multiply decimals using grids
6. Multiply decimals: where does the decimal point go?
7. Divide decimals using blocks: complete the equation
8. Divide decimals using area models: complete the equation
9. Divide decimals by whole numbers
10. Inequalities with decimal division
11. Estimate decimal quotients

K. Mixed operations: decimals

1. Add, subtract, multiply or divide decimals
2. Add, subtract, multiply or divide decimals: word problems
3. Evaluate numerical expressions involving decimals

L. Fractions and mixed numbers

1. Fractions and mixed numbers review
2. Understanding fractions: word problems
3. Equivalent fractions review
4. Compare fractions using benchmarks
5. Compare fractions using models
6. Convert between improper fractions and mixed numbers
7. Put a mix of decimals, fractions and mixed numbers in order

M. Add and subtract fractions

1. Add and subtract fractions with like denominators using number lines
2. Add and subtract fractions with like denominators
3. Add and subtract fractions with like denominators: word problems
4. Inequalities with addition and subtraction of like fractions

5. Subtract fractions with unlike denominators I
6. Subtract fractions with unlike denominators II
7. Add and subtract fractions with unlike denominators: word problems II
8. Add and subtract mixed numbers with like denominators
9. Estimate sums and differences of mixed numbers

N. Multiply and divide fractions

1. Fractions of a number: word problems
2. Multiples of fractions
3. Multiply fractions by whole numbers I
4. Multiply fractions by whole numbers II
5. Multiply fractions by whole numbers: word problems
6. Estimate products of fractions and whole numbers
7. Divide whole numbers by unit fractions using area models
8. Multiply and divide whole numbers by fractions

O. Mixed operations: fractions

1. Add, subtract or multiply fractions
2. Add, subtract or multiply fractions: word problems
3. Add, subtract, multiply or divide two fractions
4. Add, subtract, multiply or divide two fractions: word problems

P. Integers

1. Understanding integers
2. Integers on number lines
3. Graph integers on horizontal and vertical number lines
4. Compare and order integers

Q. Rational numbers

1. Compare rational numbers
2. Put rational numbers in order

R. Coordinate plane

1. Objects on a coordinate plane: positive numbers only
2. Graph points on a coordinate plane: positive numbers only
3. Objects on a coordinate plane: positive and negative numbers
4. Graph points on a coordinate plane: positive and negative numbers
5. Use a rule to complete a table and a graph
6. Quadrants

7. Coordinate planes as maps
8. Follow directions on a coordinate plane
9. Distance/direction to starting point

S. Ratios and rates

1. Write a ratio using a colon
2. Write a ratio using a fraction
3. Write a ratio: word problems
4. Ratio tables
5. Equivalent ratios: word problems
6. Compare ratios: word problems
7. Compare rates: word problems
8. Ratios and rates: word problems
9. Scale drawings: word problems

T. Percents

1. What percentage is illustrated?
2. Understanding percents: strip models
3. Compare percents and fractions: word problems
4. Estimate percents of numbers
5. Solve percent problems using grid models
6. Solve percent problems using strip models

U. Percents of numbers

1. Percents of numbers and money amounts
2. Percents of numbers: word problems
3. Find what percent one number is of another
4. Solve percent problems
5. Solve percent word problems

V. Units of measurement

1. Estimate metric measurements
2. Convert and compare metric units
3. Mixed metric units
4. Convert square and cubic units of length
5. Convert between cubic metres and litres
6. Multi-step problems with metric unit conversions
7. Choose the more reasonable temperature
8. Compare temperatures above and below zero

W. Money

1. Find the number of each type of coin
2. Add and subtract money amounts
3. Add and subtract money amounts: word problems
4. Multiply money amounts by whole numbers
5. Multiply money amounts by word problems
6. Divide money amounts
7. Divide money amounts: word problems

X. Consumer math

1. Which is the better coupon?
2. Unit prices
3. Unit prices with fractions and decimals
4. Sale prices
5. Percents - calculate tax, tip, mark-up and more
6. Estimate tips
7. Simple interest

Y. Time

1. Elapsed time
2. Time units
3. Find start and end times
4. Convert between 12-hour and 24-hour time

Z. Expressions

1. Write variable expressions
2. Write variable expressions: word problems
3. Evaluate variable expressions with whole numbers
4. Evaluate multi-variable expressions
5. Evaluate variable expressions with decimals
6. Identify terms and coefficients
7. Sort factors of expressions

AA. Equivalent expressions

1. Identify equivalent expressions using strip models
2. Properties of addition
3. Add using properties
4. Properties of multiplication
5. Multiply using properties

6. Solve for a variable using properties of multiplication
7. Identify equivalent expressions

BB. One-variable equations

1. Does x satisfy an equation?
2. Which x satisfies an equation?
3. Write an equation from words
4. Model and solve equations using algebra tiles
5. Solve one-step equations: word problems
6. Solve two-step equations
7. Solve two-step equations: word problems
8. Solve equations involving like terms

CC. One-variable inequalities

1. Solutions to inequalities
2. Graph inequalities on number lines
3. Write inequalities from number lines
4. Solve one-step inequalities
5. Graph solutions to one-step inequalities
6. Solve two-step inequalities
7. Graph solutions to two-step inequalities

DD. Two-variable equations

1. Does (x, y) satisfy an equation?
2. Identify independent and dependent variables
3. Write an equation from a graph using a table
4. Write a two-variable equation
5. Identify the graph of an equation
6. Complete a table from a graph
7. Graph patterns using rules
8. Complete a table and graph a two-variable equation

EE. Lines and angles

1. Measure angles with a protractor
2. Draw angles with a protractor
3. Measure angles on a circle
4. Types of angles
5. Estimate angle measurements
6. Name angles
7. Identify complementary, supplementary, vertical and adjacent angles

8. Find measures of complementary, supplementary, vertical and adjacent angles

FF. Two-dimensional figures

1. Identify and classify polygons
2. Graph triangles and quadrilaterals
3. Find missing angles in triangles and quadrilaterals
4. Properties of polygons
5. Sums of angles in polygons
6. Exterior angles of polygons
7. Parts of a circle

GG. Symmetry and transformations

1. Symmetry
2. Reflection, rotation and translation
3. Translations: graph the image
4. Translations: find the coordinates
5. Reflections: graph the image
6. Reflections: find the coordinates
7. Rotations: graph the image
8. Rotations: find the coordinates
9. Sequences of transformations: graph the image

HH. Three-dimensional figures

1. Identify polyhedra
2. Which figure is being described?
3. Nets of three-dimensional figures
4. Front, side and top view
5. Count vertices, edges and faces

II. Perimeter and area

1. Perimeter
2. Perimeter of rectilinear shapes
3. Area of triangles
4. Understanding area of a trapezoid
5. Area of trapezoids
6. Area of rhombuses
7. Area of compound figures
8. Area between two rectangles
9. Compare area and perimeter of two figures

JJ. Surface area and volume

1. Surface area of cubes and rectangular prisms
2. Surface area of triangular prisms
3. Surface area of pyramids
4. Volume of rectangular prisms made of unit cubes
5. Volume of irregular figures made of unit cubes
6. Volume of cubes and rectangular prisms
7. Volume of triangular prisms
8. Relate volume and surface area

KK. Data and graphs

1. Interpret pictographs
2. Create pictographs
3. Create bar graphs
4. Interpret double bar graphs
5. Create double bar graphs
6. Interpret histograms
7. Create histograms
8. Interpret circle graphs
9. Interpret line graphs
10. Create stem-and-leaf plots
11. Choose the best type of graph

LL. Statistics

1. Calculate mean
2. Interpret charts and graphs to find mean
3. Mean: find the missing number
4. Calculate mean, median, mode and range
5. Interpret charts and graphs to find mean, median, mode and range
6. Mean, median, mode and range: find the missing number
7. Identify representative and biased samples
8. Identify discrete and continuous data

MM. Probability

1. Understanding probability
2. Sample spaces of simple events (New!)
3. Probability of one event
4. Make predictions using experimental probability
5. Sample spaces for compound events (New!)
6. Compound events: find the number of outcomes
7. Identify independent and dependent events

NN. Patterns and sequences

1. Compare number patterns
2. Number sequences: word problems
3. Use a rule to complete a number sequence
4. Extend a shape pattern
5. Complete an increasing number sequence
6. Identify mistakes in number patterns

OO. Financial literacy

1. Financial institution vocabulary
2. Identify advantages and disadvantages of payment methods
3. Compare savings options
4. Balance a budget
5. Adjust a budget